

REMARKS

Entry of the above amendment and reconsideration of the above-referenced application in view of the above amendment, and of the following remarks, is respectfully requested.

Claims 1, 6, 7, and 21-23 are pending in this case. Claims 3-5 are cancelled herein and claims 21-23 are added herein to more completely cover that which Applicant regards as the invention.

The Examiner rejected claims 1, 6-7 under 35 U.S.C. § 103(a) as being unpatentable over Mandelman et al. (U.S. Patent 2003/0032272, hereinafter "Mandelman") in view of an ordinary skill in the requisite art.

Applicant respectfully submits that claim 1 is patentable over Mandelman as there is no disclosure or suggestion in the reference of placing at least one stress adjustor adjacent an active area, wherein the stress adjustor is positioned to modify a mobility of a majority carrier within a channel region of a MOS transistor. Mandelman teaches the use of dummy active areas 116. The Examiner argues that the dummy areas of Mandelman have the same material and structure as the claimed invention. Applicant disagrees that the dummy areas of Mandelman have the same structure as the instant invention. Mandelman does not disclose a size or distance of the dummy active areas with respect to the active areas. While the claim does not recite a specific distance, it does recite that the stress adjustor is positioned to modify a mobility of a majority carrier within a channel region of a MOS transistor. As noted in the specification at paragraph [0035], a location of a stress adjuster near the active area facilitates the ability to change the mobility of a majority carrier in contrast to dummy areas which are generally distant (at least 1000-2000 nanometers away). Distance affects the ability to modify a mobility of a majority carrier and Mandelman does not teach a distance between its dummy areas and active areas. The structure of

Mandelman's dummy areas is not the same as the claimed invention and there is no reason to believe Mandelman's dummy areas are stress adjustors as claimed. There is no indication that the dummy areas of Mandelman are "positioned to modify a mobility of a majority carrier in the channel region" as required by the claim. Accordingly, Applicant respectfully submits that claim 1 and the claims dependent thereon are patentable over Mandelman.

The Examiner rejected claims 1, 6-7 under 35 U.S.C. § 103(a) as being unpatentable over Murthy et al. (U.S. Patent 7,129,139) in view of an ordinary skill in the requisite art.

Applicant respectfully submits that claim 1 is patentable over Murthy as there is no disclosure or suggestion in the reference of placing at least one stress adjustor adjacent an active area, wherein the stress adjustor is positioned to modify a mobility of a majority carrier within a channel region of a MOS transistor. Instead of dummy active areas, Murthy teaches a well contact 15. The Examiner argues that the well contact 15 of Murthy has the same material and structure as the claimed invention. Applicant disagrees that they have the same structure. Murthy does not disclose a size or distance of the well contact areas with respect to the transistor area. While the claim does not recite a specific distance, it does recite that the stress adjustor is positioned to modify a mobility of a majority carrier within a channel region of a MOS transistor. As discussed above, distance affects the ability to modify a mobility of a majority carrier and Murthy does not teach a distance between its well contact 15 and transistor 18. The structure of Murthy's well contact is not the same as the claimed invention and there is no reason to believe Murthy's well contact is a stress adjustor as claimed. There is no indication that the well contact of Murthy is "positioned to modify a mobility of a majority carrier in the channel region" as required by the claim.

Furthermore, as noted in paragraph [0003] of the instant application, active areas "are defined as regions of the silicon substrate on which operative components are built . . . " Is the well contact 15 considered part of the active area because it is part of the

transistor structure? If so, then it is not a stress adjustor placed adjacent the active area. Accordingly, Applicant respectfully submits that claim 1 and the claims dependent thereon are patentable over Murthy.

Applicant respectfully submits that dependent claim 6 is further patentable over the references as there is no disclosure or suggestion in the references of the stress adjustor being configured to decrease a compressive stress imparted from the isolation structure to the channel region. Distances between the active area and dummy area/well contact of Mandelman and Murthy are not taught. Thus there is no reason provided by the prior art to expect that these structures are "configured to decrease a compressive stress imparted from the isolation structure to said channel region."

Applicant respectfully submits that dependent claim 7 is further patentable over the references as there is no disclosure or suggestion in the references of the stress adjustor being configured to increase a compressive stress imparted from the isolation structure to the channel region. Distances between the active area and dummy area/well contact of Mandelman and Murthy are not taught. Thus there is no reason provided by the prior art to expect that these structures are "configured to increase a compressive stress imparted from said isolation structure to said channel region."

Applicant respectfully submits that newly added claim 21 is patentable over the references as there is no disclosure or suggestion in the references of placing the at least one stress adjustor between about 50 nanometers and about 300 nanometers from said active area. Neither reference teaches a distance at all.

Applicant respectfully submits that newly added claim 22 is patentable over the references as there is no disclosure or suggestion in the references of a long dimension of the at least one stress adjustor being placed perpendicular to a flow of current through the MOS transistors and being substantially equal to a gate width of the MOS transistor.

Applicant respectfully submits that newly added claim 23 is patentable over the references as there is no disclosure or suggestion in the references of a long dimension of the at least one stress adjustor being placed parallel to a flow of current through the MOS transistors and being substantially equal to a gate length of the MOS transistor.

In light of the above, Applicant respectfully requests withdrawal of the Examiner's rejections and allowance of claims 1, 6, 7, and 21-23. If the Examiner has any questions or other correspondence regarding this application, Applicant requests that the Examiner contact Applicant's attorney at the below listed telephone number and address.

Respectfully submitted,

/Jacqueline J Garner/

Jacqueline J. Garner
Reg. No. 36,144

Texas Instruments Incorporated
P. O. Box 655474, M.S. 3999
Dallas, Texas 75265
Phone: (214) 532-9348
Fax: (972) 917-4418